

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: DAWN GARRETT Examiner #: 76107 Date: 10/19/2004
 Art Unit: 1774 Phone Number 301-272-1523 Serial Number: 10700916
 Mail Box and Bldg/Room Location: Room 10A54 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Organic Element For Electroluminescent Devices
 Inventors (please provide full names): William Begley, Tukaram Hatwar,
Manju Rajeswaran, David Giesen, Natasha Andrievsky
 Earliest Priority Filing Date: 11/4/2003

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search Formula (I) as described in claim 1.

(112(4) in claim 28: Compound INV-8 falls outside scope of claim 1.)

STAFF USE ONLY

| | Type of Search | Vendors and cost where applicable |
|---------------------------------------|--|-----------------------------------|
| Searcher: <u>EL</u> | NA Sequence (#) _____ | STN <u>\$147.99</u> |
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| Date Searcher Picked Up: _____ | Bibliographic <input checked="" type="checkbox"/> <u>(and)</u> | Dr Link _____ |
| Date Completed: <u>10-20-04</u> | Litigation <input checked="" type="checkbox"/> <u>(and)</u> | Lexis/Nexis _____ |
| Searcher Prep & Review Time: <u>5</u> | Fulltext _____ | Sequence Systems _____ |
| Clerical Prep Time: _____ | Patent Family _____ | WWW/Internet _____ |
| Online Time: <u>35</u> | Other _____ | Other (specify) _____ |

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FILE 'REGISTRY' ENTERED AT 16:02:46 ON 20 OCT 2004
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L4 STR L3
L5 STR L1
L6 STR L5

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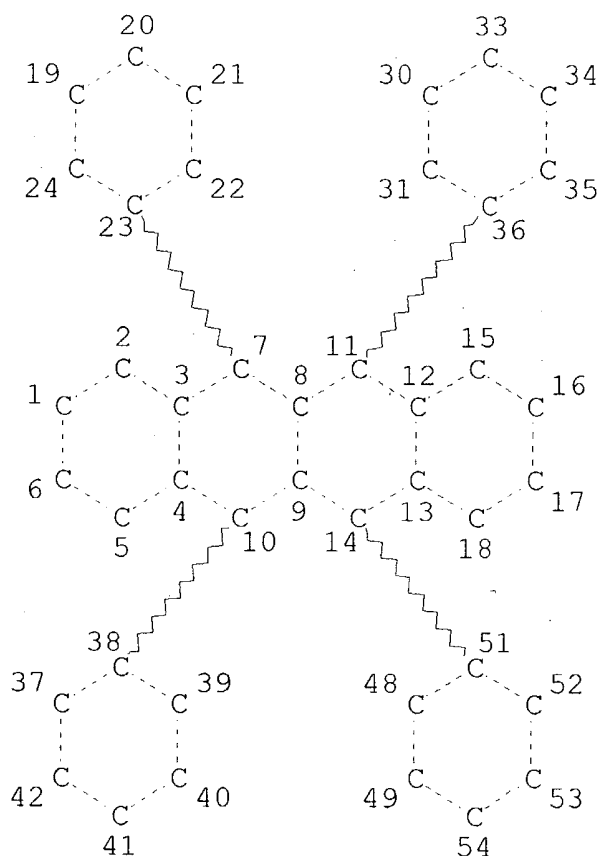
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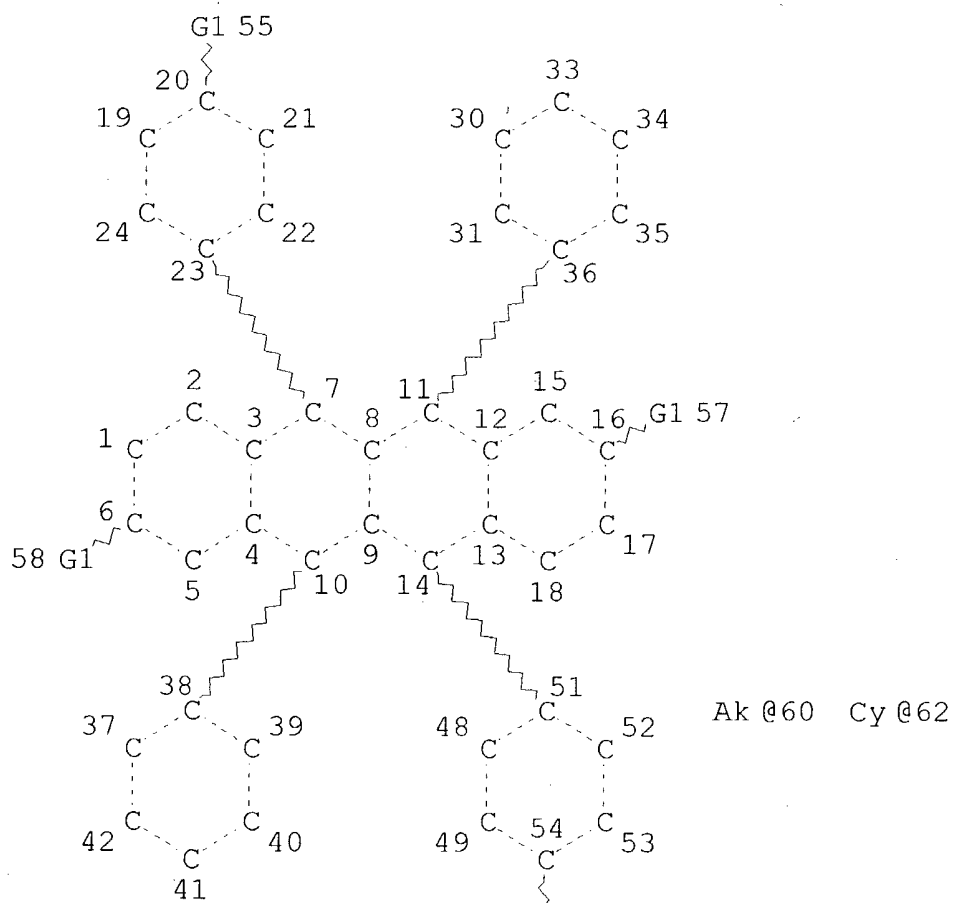
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 42

STEREO ATTRIBUTES: NONE
L5 STR



Page 1-A

G1 56

Page 2-A

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GRAPH ATTRIBUTES:

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NUMBER OF NODES IS 48

STEREO ATTRIBUTES: NONE

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100.0% PROCESSED 185 ITERATIONS
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1 ANSWERS

=> file zcaplus

FILE 'ZCAPLUS' ENTERED AT 16:03:19 ON 20 OCT 2004

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L12 ANSWER 1 OF 1 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:128568 ZCAPLUS

DOCUMENT NUMBER: 140:366126

TITLE: Effects of tertiary butyl substitution on the charge transporting properties of rubrene-based films

AUTHOR(S): Fong, H. H.; So, S. K.; Sham, W. Y.; Lo, C. F.; Wu, Y. S.; Chen, C. H.

CORPORATE SOURCE: Department of Physics and Center for Advanced Luminescence Materials, Hong Kong Baptist University, Kowloon Tong, Hong Kong, Peop. Rep. China

SOURCE: Chemical Physics (2004), 298(1-3), 119-123
CODEN: CMPHC2; ISSN: 0301-0104

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

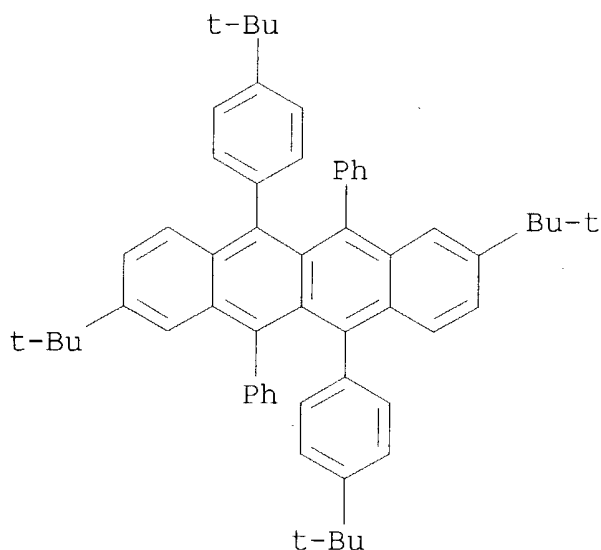
AB The charge transporting properties of rubrene (5,6,11,12-tetraphenylnaphthacene or RB), and a new rubrene-based complex, tetra(t-butyl)-rubrene [2,8-di(t-butyl)-5,11-di[4-(t-butyl)phenyl]-6,12-diphenylnaphthacene or TBRB], were examd. in the form of amorphous films as functions of elec. field and temp. by means of time-of-flight technique. At room temp., the hole mobility .mu. for RB is 7-9 .times. 10⁻³ cm² V⁻¹ s⁻¹ whereas .mu. for the more bulky TBRB is about 2 .times. 10⁻³ cm² V⁻¹ s⁻¹. The microscopic conduction mechanism in both materials can be modeled by the Gaussian disorder model in which hopping conduction occurs through a manifold of sites with energetic and positional disorder. The energetic disorder in RB and TBRB is almost identical and is about

78 meV in each case, and is mainly controlled by van der Waals interaction. The t-Bu groups in TBRB induce large fluctuations in the spatial sep'n. among TBRB mols. and result in an increase in the positional disorder, and hence a redn. in the hole mobility.

IT 682806-51-5, 2,8-Di(tert-butyl)-5,11-di[4-(tert-butyl)phenyl]-6,12-diphenylnaphthacene
(TBRB; effects of tertiary-Bu substitution on charge transporting properties of rubrene-based films)

RN 682806-51-5 ZCAPLUS

CN Naphthacene, 2,8-bis(1,1-dimethylethyl)-5,11-bis[4-(1,1-dimethylethyl)phenyl]-6,12-diphenyl- (9CI) (CA INDEX NAME)



IT 682806-51-5, 2,8-Di(tert-butyl)-5,11-di[4-(tert-butyl)phenyl]-6,12-diphenylnaphthacene
(TBRB; effects of tertiary-Bu substitution on charge transporting properties of rubrene-based films)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT